With best compliments to Shamal from Kallick. Skallikuzhy 14/8/92

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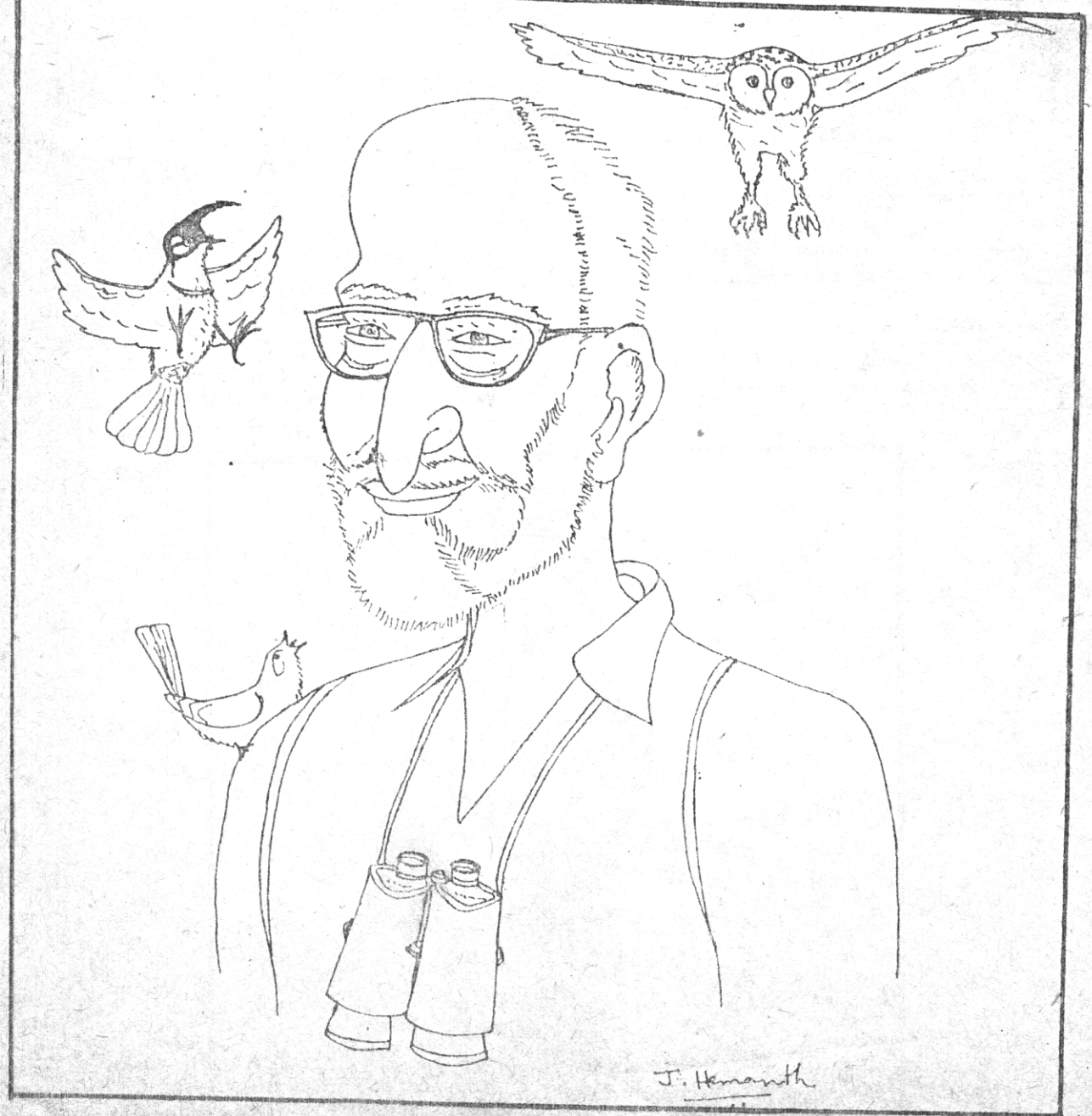


* SPECIAL FEATURE

Dr. Salim Ali - A Tribute

by T.S. Srinivasa

Behind the birds he would flee,
Following them in lane and lee,
Always returned with a glee,
Well, he was Dr.Salim Al-lee.

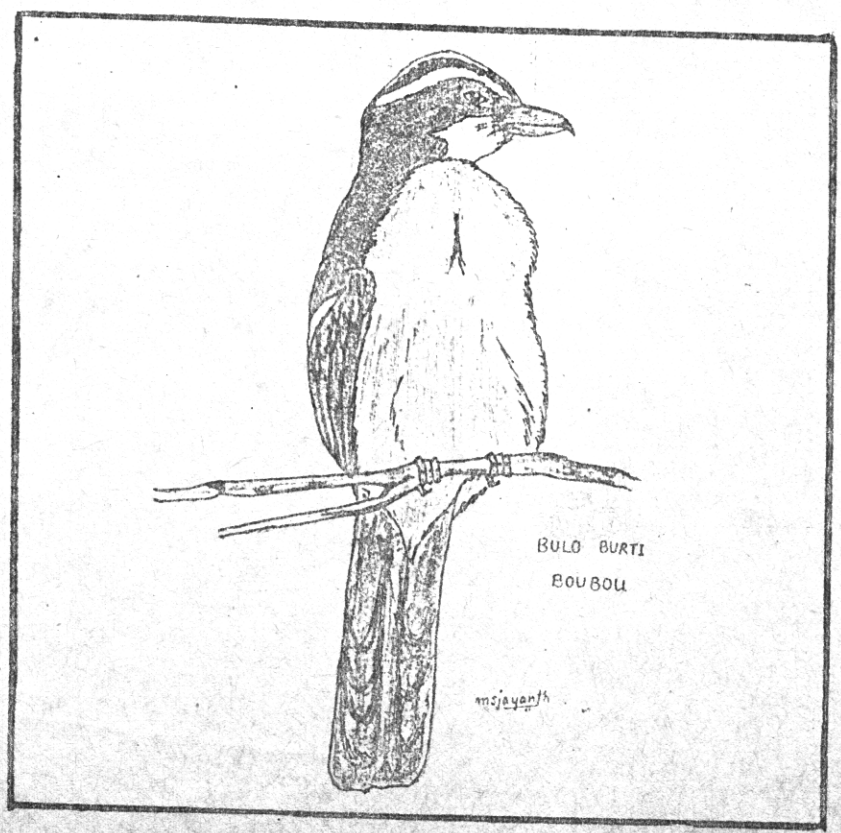
As a boy he would shoot birds to cook,
And one day shot one with a different look,
Curiously to B.N.H.S he took,
That's what he says in his book.

Every one knows the rest,
In Ornithology, he was one of the best,
Never did he work for fame,
Nor did he care for the same.

To country's every nook,
His profession took.
All the birds he brought to book,
After having a confirmed look.

With many a feather in his cap,
To him age was no handicap.
Though he migrated to a world apart,
He is resident in every bird(er)'s heart.

* Above poem is a tribute to the great Ornithilogist, late Dr.Salim Ali, who reached the heavenly abode on June 20, 1987



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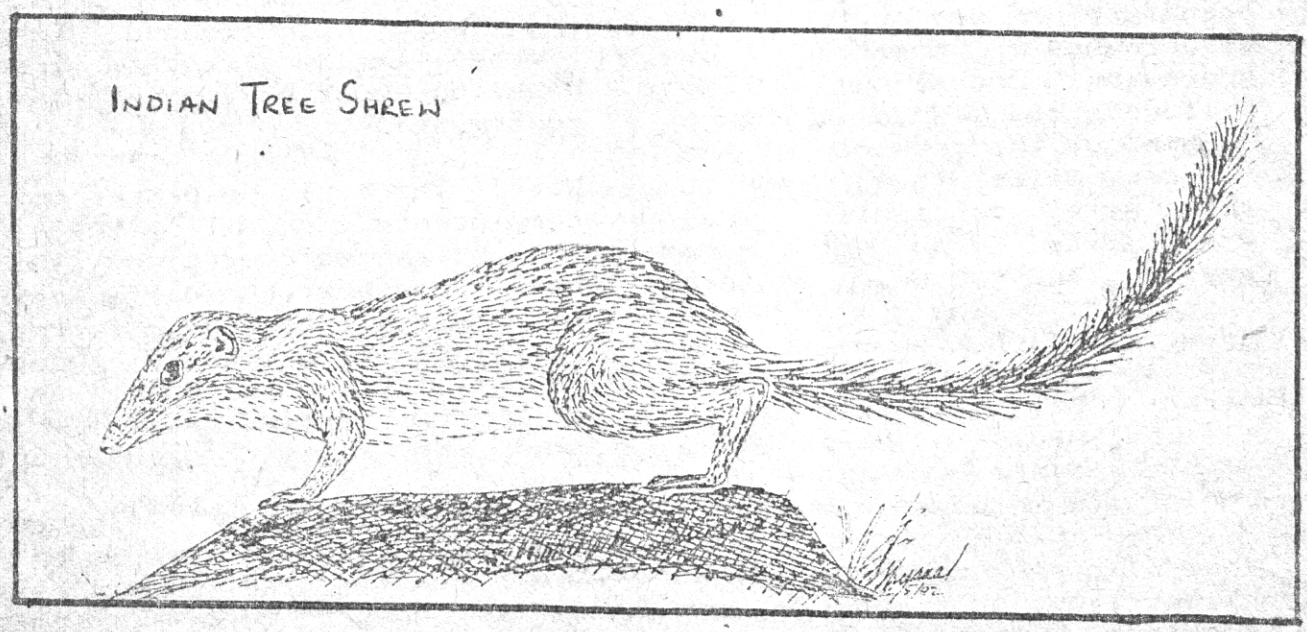

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EDITORIAL:

Dr.Kumar Ghorpade writes in an introduction to 'Bird Call' dated 23 May 1986, quoting from section of Dr. Philip J. Darlington Junior's (1980) book - ''Evolution for Naturalists : The simple principles and complex reality''. He expects all birdwatchers to be naturalists too, who are trying to comprehend the whole of our natural ecosystem/environment. ''Otherwise'' he feels ''you will end up like the 'blind men who felt a few parts of the elephant' and thought they had seen the whole.''

A few weeks ago, newspaper headlines reported the sudden appearence of a Panther family near Kengeri on the outskirts of Bangalore city. The animals had been forced to take refuge near here, being driven out of the scrub forests of Savanadurga (about 65 km from Bangalore) due to the disturbance created by quarrying operations. The villagers near Kengeri, though stunned by the presence of the big cats amidst them, took to them well, especially since the cats did not harm anybody, and the male, as some described, was a true 'gentleman'. But he was caught by the Forest Department staff after his dog-and-cattle lifting became a habit. The female and the cubs are also caught and released eventually.

This is an example which illustrates just how we are meddling with the wild habitats and throwing out the animals out of their homes. We can imagine how the position of our wildlife would be, in future, if we go on plundering our eco-systems, relentlessy, and if any incident like this one occurs, it will be a bitter tussle between man and beast with tragic end for both.

COMMENTARY:

One young man to another, ''Saving the environment ? It has become the latest fashion, yeah ! ''. And through his words comes, out what is all happening in the guise of environmental protection.

Day after day, we see seminars being organised and summits being conducted in the grandest way imaginable. And there is 'big talk' of conservation.

And day after day, we see that the 'envirоinment bug' is catching on .. in newspapers, TV, radio .. Ofcourse, our 'Netas' (leaders) too are babbling about environment and conservation.

Wait! There is no place for complacence. All these, though, are welcome signs, the real picture is different, because day after day, forest <u>are still</u> being cleared, lakes <u>are still</u> being silted up and pollution of air, water and soil <u>is still</u> going on unabated.
So, unless and until we sweep the 'pollution' off our minds and really start working, before we feel sorry for not doing so, we can only help to ask desolately, '' who will bell the cat? ''

J. Hemanth

* INTRODUCING

Tree Shrews by S. Karthikeyan

Tree shrews are small mammals resembling squirrels in general appearance. These animals were initially classified as insectivores. Later structural comparison of the skull, brain and other body systems, led them to be included along with primates.

Recent indepth studies have questioned its classification along with primates and since have been placed under a separate order Scandentia.

The first reference to the tree shrews date back to 1780 when a surgeon by name William Ellis who accompanied Captain Cook on his voyage to the Malay archipelago illustrated them and coined the term 'tree shrew'.

There are in all 18 species spread over six genera belonging to the family Tupaiidae (order Scandentia). In Malay 'tupai' means squirrel. All the 18 species are confined to south and southeast Asia (oriental region). Of these Borneo alone has ten species.

Within Indian limits only three species are known to occur - the Common tree shrew Tupaia glis and the Indian tree shrew anathana ellioti on the mainland while the Nicobar tree shrew Tupaia nicobarica as the name suggests is found on the Nicobar islands. The Common tree shrew is widely distributed over the Malay peninsula and the Malayan archieplago apart from being found over the northwestern part of India. The Indian tree shrew on the other hand is endemic to India and occurs south of river Ganges.

The term 'tree shrew' is a misnomer since most of them are less arboreal and are better suited for life on ground. This is no exception to the Indian tree shrew A. ellioti. The genus 'Anathana' is infact derived from the term 'anathaan' which means squirrel in the local tamil dialect. This is because of the fact that the tree shrew resembles the squirrel both in appearance and habits closely.

Tree shrews are amongst the most neglected orders of mammals. Morphological and anatomical description of these peculiar animals are available and in some cases behavioural aspects of captive animals are known but very little field studies have been undertaken. Amongst tree shrews - the Common tree shrew T. glis is the most well known owing to its close association to humans.

All the tree shrews are small animals with an elongated body and long furry tails except in the Pen-tailed tree shrew Ptilocercus lowii. The snouts are elongated depending on the habits of the species i.e. the more terrestrial species have longer snouts than the more arboreal ones - the longer snouts helping to search for food among leaf litter.

Unlike most small mammals the tree shrews are diurnal exception being the Pen-tailed tree shrew P. lowii and the Smooth-tailed tree shrews of genus Dendrogale sps. the former being nocturnal and the latter crepuscular.

Tree shrews have a very short gestation period (45-50 days varying according to species) and one to three naked young with their eyes and ears closed are born. the young emerge from the nests as small replicas of the adults.

Tree shrews have also been observed to maintain territories.

In 1849, British naturalist Waterhouse described the Indian tree shrew from specimens obtained from Eastern Ghats (Cuddapah in Andhra Pradesh). Later it was reported from Shevaroy hills, Salem district, Tamil Nadu. The species also occurs in many other places in India.

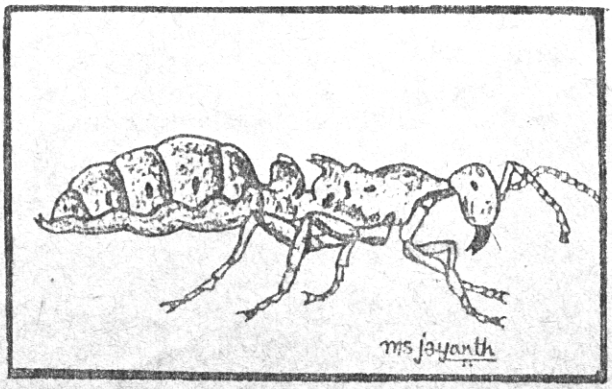
Like all its relatives it is also a less known creature. Virtually nothing is known about its life history. The Indian tree shrew is slightly larger than the familiar palm squirrels Funambulus sps. but lacks the stripes. It is reddish brown on the back fading on the flanks and the undersides are white. The forehead and crown being grey. A white shoulder stripe is present. The tail is also a field character as it is held in a 'U' shape the tip pointing upwards while the mid portion almost touches the ground.

Its habits are very similar to the palm squirrels, feeding as it holds the food (fruits and insects) between its forepaws while sitting on its haunches. While alarmed it stands up on its hindlegs or on its haunches to look around in a typical mongoose fashion. Otherwise move about hopping from rock to rock thereby making almost no sound even when traversing ground covered with leaf litter.

Though this species is known from slightly more than a dozen specimens collected during the early twentieth century in various places it was present in captivity only once - housed in Calcutta zoo way back in 1876.

As already mentioned these animals are little known and their exact roles in nature is not known. The Indian tree shrew was never known to be a common species. The single largest threat to the survival of the species could be habitat destruction.

The author is currently involved in the study of the Indian Tree shrews in Shevaroy hills (TN) sponsored by WWF-US through WWF-India (TNSO) -Ed.



* ARTICLE

The Kuth : A valuable medicinal herb

by J.N. Prasad

An infinite number of plants and different parts of plant such as roots, flowers and seeds have provided man with such important substances as vitamins, proteins and alkaloids, essential oils and ingredients for drugs, pharmaceuticals, perfumes, insecticides and scores of other products.

India has been one of the first countries to recognize the value of various plants since the time of Sushrutha and to cultivate them, on a small scale in home gardens & on a large scale in herbal gardens.
Endowed with climatic conditions varying between torrid and frigid zones, large tracts of tropical and temperate plains, hills and valleys and equipped with irrigated soils and cheap labour, India has all the requirements conducive to the growth of plants. In fact, India is a well stocked emporium of medicinal plants: nearly 3/4th of the botonical drugs mentioned in different pharmacopoeiae are grown here in natural state.

Often, India is called as the botonical garden of the world, with a record of botonical wealth that currently constitutes over 2000 types of medicinal and essential oil bearing plants. In recent years these have proved to be as valuable as gold. Some of the plants that are widely used in the manufacture of medicines,for example: Glory Lily Gloriosa superba, Rosy Perwinkle Catharanthus roseus Sarpagandhi Rauwolfia serpentina, Kuth etc. have good market potential at home and abroad.

The Kuth or Costus roots Saussurea lappa is very popular medicinal herb which grows abundantly in the Himalayas and in the Kashmir valley. It belongs to family Asteraceae.

Kuth is highly sought by the practitioners of Ayurvedic, Unani and home remedies for its use in curing various ailments.

Only the roots of this herb have medicinal properties. The roots contain an odorous compound composed of two liquid resins, an alkaloid, a solid resin, a salt of valeric resin, an astringent principle and an ash which contains Manganese. The active principles of roots are :

a) an esential oil of strong, aromatic, penetrating and fragrant odour.
b) a glucoside and
c) an alkaloid called Saussurine (about 0.05%).

Glossary:

* Pharmacopoeiae: directory of medicinal plants.

* Carminative: a medicine which expells gas from stomachs and intestine.

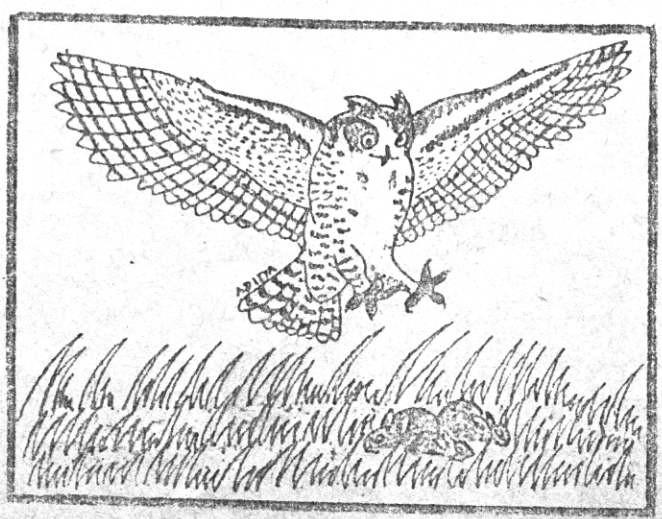
* Diuretic: medicine to increase flow of urine.

* Antihelmentic: medicine to cure roundworms, tapeworms etc. #

The esstential oil and glucoside are pharmacologically active bodies though the alkaloid is less active. Essential oil in Kuth has carminative, strong antiseptic and disinfectant properties especially against the Streptococcus and Staphylococcus bacteria and is also used as an expectorant and diuretic. It relaxes the involuntary muscle tissue and is a cardiac stimulant. The intravenous injection of the essential oil also produces drowsiness and has some aphrodisiac properties. Inhalation of the root produces a marked depression of the central nervous system and for that reason, it was smoked as an substitute for Opium. The alkaloid in Kuth acts as a carminative and stimulant. Roots are also used as antihelmintic for treatment of worms.

A closely related species Sausurrea hypoleuca is sometimes used as a substitute for S. lappa. The roots due to heavy demand, are frequently adulterated with the roots of Salvia lanata or Ligularia and one of the aconites.

Kuth is used widely in the pharmaceutical industry for its vast remedial properties. In fact it was being exported in huge quantitites to south east Asian countries in the seventies and early eighties. Due to illegal trafficking and extensive collection from its wild habitat Kuth is a highly threatened species. Pressures from the environmentalists had put a ban on its export until last August 1991. Due to immense pressure from the pharmaceutical industry and traders,again it was permitted for export as it was an important foreign exchange earner. It fetches upto US Dollars 1.2/kg in the international market.
Welcome news to environmentalists came on with new export-import policy of 1992-9t announced by our Financ7 minister Dr.Manmohan Singhe effective from 1 March 1992, Kuth, though is permitted fo. export, is subject tr licencing if the origin oo certificate issued by thf Tribal Co-operative Marketine Federatiuon of India Ltdg (TRIFED). Kuth cultivated i. private lands and derivativen except wild varieties can bs exported without a license bue subject to some terms ant conditions specified in the Handbook of procedures in Exie policy book 1992-97. Thim however, will come a long was in stopping illegal collectioy from wild and encourge genuinn farmers growing this plant. #



* SOME FACTS

OWLS - MASER PREDATORS OF THE NIGHT !

Owls have a complex system of communication (vocal) of which we know little about. They can see with one hundred times less light than is necessary for humans. They have a long and flexible neck which allows them to swivel their head like a radar scanner. This has given to the popular belief that Owls can turn the head 360 derees which is not true.

Some species of the Owls have one ear lower on the skull than the other. One of them is directed upwards while the other is directed downwards. As a result, each ear receives sound waves at a slightly dirrefent time and volume. This helps in precise location (both horizontal and vertical) of the origin of the emitted sound. #

ALL FOR HONEY !

A worker bee lives for about six weeks during which period it flies nearly 800 km searching for pollen and nectar. All of the nectar it collects in its entire life-time makes only about four drops of honey !

DID YOU KNOW ?

* Adult male Kangaroos are called 'Boomers', females are 'Fliers' while the young ones are called 'Joeys'!

* The first natural history society in the world is Temple Coffee House Botanic Club founded almost three hundred years ago !

* Halophytes are plants which can tolerate high level of salt in the soil. #

Mend ways and spare planet, say Children

RIO DE JANEIRO, June 12.

Children on Thursday told delegates to the Earth Summit to change their ways and look after the planet for future generations.

"We raised all the money to come here ourselves, to come 8000 km to tell you adults you must change your ways, " 12 year-old Severn Suzuki from Canada the Summit." I am fighting for my future. Iam here to speak on behalf of the starving children around the world whose cries go unheard. I am here to speak for the countless animals dying across this planet."

"I am afraid to go out in the sun now because of the holes in our ozone layer. I 'm afraid to breathe the air because I don't know what chemicals are there in it... if you don't know how to fix it, please don't break it," Suzuki said.

Suzuki was given a standing ovation after her speech, during which closed-circuit television showed one delegate wiping away her tears.

Suzuki was one of the four children, two from Canada, one from Chile and one from Germany, chosen to address the summit.-Reuter

Discovery and Dilemma

by J. Hemanth

When Edmund Smith saw a non-descript pied (black and white) bird that he could not identify while it flew over his car's hood, he could not have had the vaguest idea as to what he had seen.

The bird was an extremely rare species of Shrike (popularly known as Butcher birds - as they have the habit of capturing insects and impaling on to thorns to consume later when they are hungry), previously unknown to scientists - called the 'Bulo Burti Boubou' (as locally referred to this Somalian Shrike in some African dialect). Researchers in Somalia, working with Mr.Smith, a biologist, captured the bird, the only known example of the new species yet. But they were in a quandary as to whether to kill the bird or not to kill. Contrary to the common practice of scientists (a tradition followed since about 200 years) of shooting, poisoning, drowning or crushing or even preserving as dead specimen for future study. The team of scientists, after keeping the bird in captivity for a year, released it into the wild, hoping that it would help in propagating the rare species.

But this sparrow - sized bird had left its mark - in the form of feather, photographs and a few blood samples. And, ofcourse, a long lasting dilemma - whether a very rare species is more valuable croaked or alive. To systematists, the act of releasing the bird was an outrageous blunder bordering on sin.

When a species is discovered, biologists choose one individual as the 'type specimen' to compare other individuals with, but since, in this case, only one individual was all that they could find, scientists chose the Boubou as its species type.

After capture, biologists videotaped, photographed and tape-recorded, and took blood samples of the bird. But unfortunately, the sample was lost through a airline baggage mix up when it was destined for Copenhagen from Somalia, for analysis.

Eventually, one of the Boubou's genes was analysed with DNA from feathers that were preserved in alcohol. And more blood was taken from the bird and preserved for analysis.

When the DNA data were analysed and compared with segment of DNA from other shrikes, scientists found that the results were as they had expected, that is, the Boubou was distinct enough from other shrikes to be called a new species.

The biologists rightly named this Somalian Shrike as Laniarius liberatus, which means 'the bird was described on the basis of freed individual' - Carool Yoon/ The New York Times Service and The Times of India. #

Waterfowl - IX : Cormorants and Darter

These are gregarious, fish-eating aquatic birds with predominantly black and white plumage. They are characterized by long and pointed, dagger-like bill - hooked at the tip in case of cormorants and, stiletto-like and pointed in the Darter; long and slender neck and body shaped like a spindle, the neck being very snake-like in Darter; narrow, stiff tail; short legs and webbed-type of feet adapted for swimming and diving; long, narrow wings. One unique feature about these birds is that they donot have oil glands to preen and to keep their feathers water-proof. Hence, they need to dry them by spreading their wings.

The stance of cormorants when they are perched, is upright. They are found usually in inland waters, rivers etc.

Being expert swimmers and divers, they can literally 'fly' underwater. Their flight in the air is strong and well-sustained although they rise with some difficulty. They are colonial nesters, building their nests usually on trees.

THE KEY

I Neck moderately long and slender; bill hooked at tip .....A,B

II Neck long and snake like; bill dagger-like.....C

A Size large (large duck +).....a

B Size moderate (between Crow and Kite).....b,c

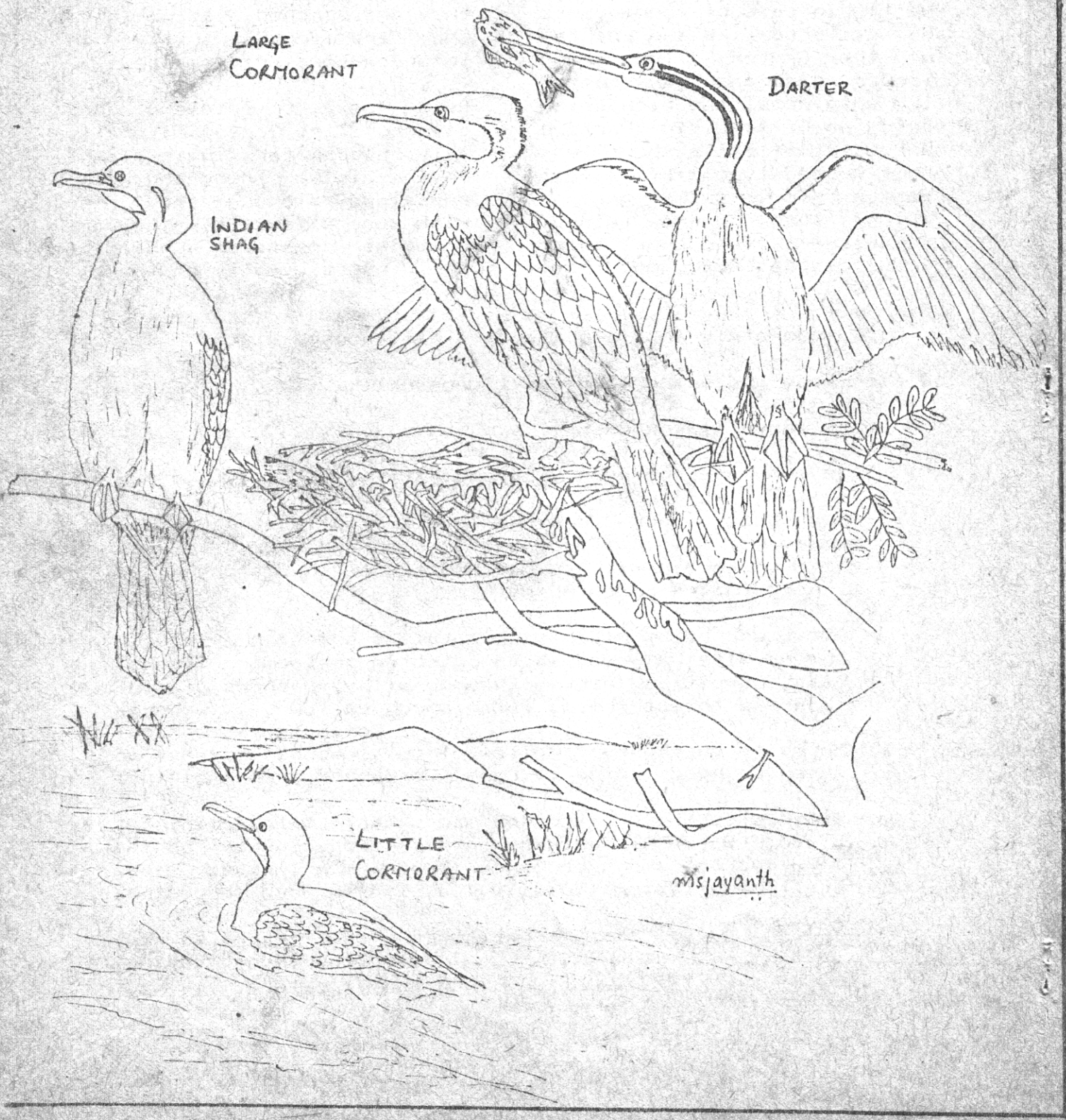
C Above black; back and wings longitudinally streaked and speckeled with silvery grey; head and neck velvety chocolate-brown with chin, throat & a line along sides of neck white; below shiny black...Darter or Snake-bird

a. Above and below black with metallic greenish or bluish sheen with a broad white patch on posterior flanks; head, crest and neck with some silky feathers; facial skin and throat white; gular pouch yellow .....Large Cormorant (breeding)

No white on flanks; yellow of gular pouch faded, no sheen on head and neck..Large Cormarant (non-breeding)

b. Above glistening black (bronze sheen); below shiny jet black; tuft of feathers on each side of neck behind ear-coverts and specks on head pure white; wings scalloped lighter.....Indian Shag (breeding)

Yellow gular skin present; throat speckled with white .....Indian Shag (non-breeding)

c. Bill shorter and stouter; forehead domed with a short crest on nape and a tuft of feathers on fore-crown; black overall with bluish or greenish sheen; upper back and wing-coverts dark silvery grey, scalloped with black; a few white plumes on neck.....Little Cormorant (breeding)

No white feathers on crown and neck; throat white..... .....Little Cormorant (non breeding)